

Erosion Prevention and Sediment Control Notes

- Contractor shall be responsible for complying with all State and Local erosion prevention and sediment control standards and permit requirements during construction.
- The limit of disturbance shall be clearly defined by Contractor's surveyor prior to clearing. Erosion and sediment control devices shall be established to trap sediment on site.
- All erosion control shall be placed as shown on the drawings or as ordered by the Engineer. The Contractor shall maintain the erosion control measures until the Engineer is satisfied that permanent ground cover is established and that further measures are not required. It shall be the responsibility of the Contractor to employ appropriate erosion control as shown on these drawings and any other measures as necessary to trap sediment on site.
- All areas of disturbance shall be permanently or temporarily stabilized as soon as possible and within 48 hours of final grading. All areas of disturbance shall be at least temporarily stabilized within 7 days of initial disturbance. Any disturbance after 7 consecutive days of exposed soil shall be stabilized daily unless the following exceptions apply:
 - Stabilization is not required if earthwork is to continue in the area in the next 24 hours and there is no precipitation forecast in the next 24 hours.
 - Stabilization is not required if the work is occurring in a self-contained excavation (i.e. no outlet) with a depth of 2 ft. or greater (e.g. house foundation excavation, utility trenches). Stabilization measures shall include mulch and netting, erosion control matting, crushed stone, gravel, or pavement.
- Refer to the Low Risk Site Handbook for Erosion Prevention and Sediment Control for acceptable methods of stabilization.
- The Contractor shall use water for dust control. **There will be a ZERO tolerance for dust**
- The Contractor shall provide inlet protection around all catch basins (existing or new) that collect construction site stormwater runoff. Crushed stone inlet protection may be used in non-paved areas.
- A stabilized construction entrance (See Detail) shall be installed and maintained at all construction access locations.
- All paved roads used by construction vehicles shall be swept daily during periods of active construction, or at a greater frequency, if dirt or gravel is tracked from the site. The swept debris shall be immediately removed from the curb face if applicable.
- All temporary erosion and sediment control measures shall be removed within 30 days after final stabilization or after the measures are no longer needed, unless otherwise authorized.
- All sediment removed from sediment control practices shall be placed in an approved soil disposal area.
- All areas that do not have established vegetation by October 15th must be stabilized in accordance with the Water Construction Requirements listed on this sheet.
- After permanent seeding the Contractor shall be responsible for watering, if necessary, to ensure adequate vegetative growth.
- Water from dewatering activities that flows off site must be clear. Water must not be pumped into storm sewers, lakes, or wetlands unless the water is clear.
- The Contractor shall be responsible for all inspection and maintenance of the erosion prevention and sediment control practices for the project. Inspections and corresponding reports shall be performed at a minimum, once a week and after every precipitation event that results in a discharge from the site.

Contractor shall call 540-1748 or email Megan Mair (mmair@burlington.vt.us) at least 24 hours prior to initiating earth disturbance and submit name, cell phone number, and email contact information of the erosion control coordinator for the project.

The perimeter of the site and all BMPs will be inspected at the end of each workday to ensure that sediment will not leave the site. If sediment has traveled beyond the site boundary, it shall be swept up or otherwise removed and deposited on-site in an upgradient area at the end of each workday.

Winter Construction Requirements (October 15th - April 15th)

- For areas to be stabilized by vegetation, seeding shall be completed no later than September 15th to ensure adequate growth and cover.
- If seeding is not completed by September 15th, additional non-vegetative protection must be used to stabilize the site for the winter period. This includes the use of Erosion Control Matting or netting of a heavy mulch layer.
- Where mulch is used for temporary stabilization it must be applied at double the standard rate, or a minimum of 3 inches with an 80%-90% cover.
- Stabilized Construction Entrances shall be enlarged to provide for snow stockpiling.
- Limits of disturbance shall be moved or replaced to reflect any revised boundaries of winter work.
- A snow management plan shall be prepared with adequate storage and control of meltwater, requiring cleared snow to be stored down slope of all areas of disturbance and out of stormwater treatment structures.
- A minimum 25 foot buffer shall be maintained from perimeter controls such as silt fence.
- Drainage structures must be kept open and free of snow and ice dams.
- Silt fence and other practices requiring earth disturbance must be installed ahead of frozen ground.
- To ensure cover of disturbed soil in advance of a melt event, areas of disturbed soil must be stabilized at the end of each work day, with the following exceptions:
 - If no precipitation within 24 hours is forecast and work will resume in the same disturbed area within 24 hours, daily stabilization is not necessary.
 - Disturbed areas that collect and retain runoff, such as house foundation or open utility trenches.
- Prior to stabilization, snow or ice must be removed to less than 1 inch thickness.
- Use stone to stabilize areas such as the perimeter of buildings under construction or where construction vehicle traffic is anticipated. Stone paths should be 10-20 feet wide to accommodate vehicular traffic.

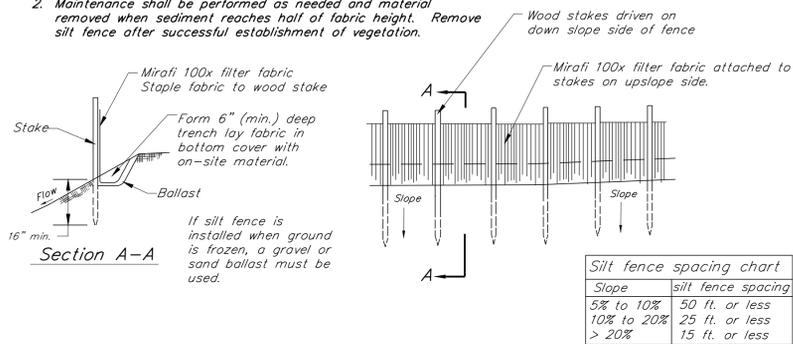
General Grading and Site Work Notes

- All area disturbed and all areas within the clearing limits shall be graded and covered with a minimum of 4" of compacted loam topsoil. The areas to be loamed shall be free and clear of roots, waste material and other deleterious material. Topsoil shall be spread and lightly compacted to a depth of 4". Topsoil shall be approved by the Engineer.
- All cut slopes shall be no steeper than 3h on 1v. All fill slopes shall be no steeper than 2.5h on 1v.
- Temporary silt fence shall be erected prior to any clearing or construction. Fencing may be erected in phases, but in no case shall construction of clearing proceed fencing. Special areas may be designated by the Owner for preservation of existing trees. These areas shall be the Contractor's responsibility to insure no damage is done to designated trees.
- Existing plantings are located in general areas as shown on this plan. Contractor shall protect plantings so as not to damage these or their root systems.
- Slope stability based upon unsaturated soil conditions. If during construction saturated soils are encountered, contact the Engineer immediately.

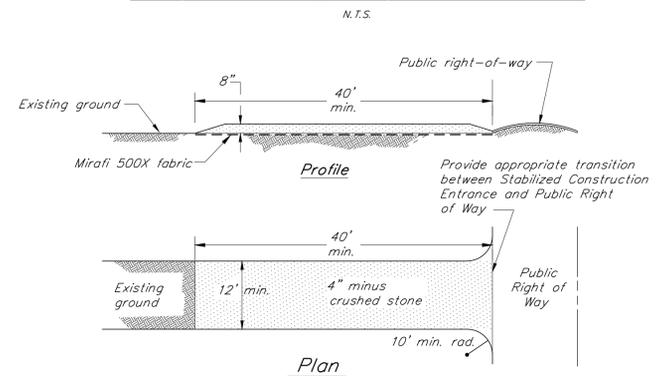
Construction Limit Barriers

- Temporary chain-linked construction fence shall be used to delineate construction limits where practical.
- Orange construction fence or snow fence shall be used to demarcate short-term construction activities as well as around the drip line of any existing trees to remain.
- 3" thick orange polyester mesh webbing may also be used to demarcate construction limits except within 50 feet of any stream, lake, pond or wetland. For this project, polyester mesh webbing should not be used in areas that are proximate to pedestrian or vehicular traffic.

- NOTE:**
- Contractor shall be responsible for the installation, maintenance, and removal of silt fence in all locations shown on the plans.
 - Maintenance shall be performed as needed and material removed when sediment reaches half of fabric height. Remove silt fence after successful establishment of vegetation.



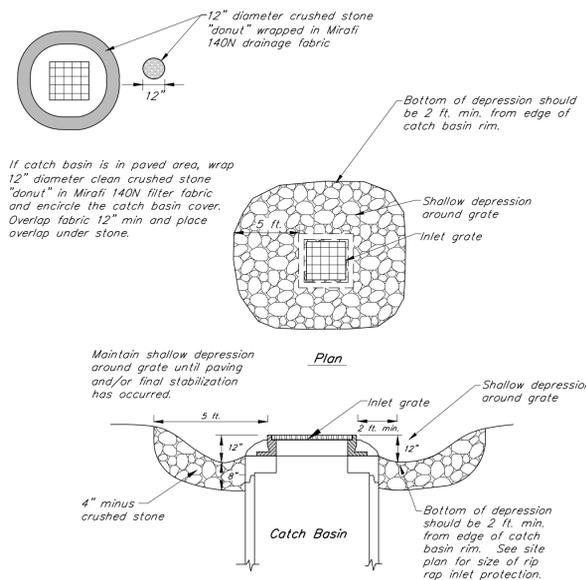
Typical Temporary Silt Fence



Note:

- Contractor shall be responsible for the installation, maintenance, and removal of a stabilized construction entrance at each construction entrance for the project. The Construction Stabilized Entrance and its continued maintenance shall be a minimum measure to prevent tracking of sediment off-site.
- Contractor to use Mirafix 500x under stone for temporary construction roads.
- Stabilized construction entrances shall be repaired when voids are 80% filled with sediment. Repair shall include adding additional 4" minus crushed stone and/or removal of contaminated stone.

Temporary Stabilized Construction Entrance



Catch Basin Inlet Protection

Soil and Seeding Notes

- Topsoil shall be screened and shall have a minimum 4" depth unless additional depth is specified on the plans. Topsoil shall be natural, fertile, friable soil representative of local productive soil and free of clay lumps, stones, subsoil or other foreign matter, not frozen or muddy. Acidity range PH 5-7 not less than three (3) percent humus. Samples will be required for approval. All soil testing costs will be paid by Contractor.
- Commercial fertilizer shall be a complete plant food containing nitrogen (50% organic) phosphoric acid and potash. Soil tests will indicate composition required.
- Hydro seeding is the preferred practice for turf establishment. Specifications are:
 - Fertilizer: 19-19-19 75 lbs. per 1,000 gallons of water
 - Lime: 100 lbs. per 1,000 gallons of water
 - Seed: 6 lbs. per 1,000 square feet.
 - 71.46% Min. Fuluro 3000 Per Rye Grass Germ: 90%
 - 14.81% Min. Dynasty Tall Fescue Germ: 90%
 - 9.74% Min. Creeping Red Fescue Germ: 90%
 - 2.32% Max. Crab
 - 1.61% Max. Inert
 - 0.06% Max. Weed
 - Mulch: 300 lbs. per 1,000 gallons of water.
 - Tacifer: 5 lbs. per 1,000 gallons of water.
- The grass seed may be applied by hand method at a rate of 6 lbs. per 1,000 sq. ft.
- Areas having soil compaction as a result of construction shall be rota-tilled prior to seeding.
- If hand seeding, only straw mulch is to be used and secured by netting either organic or inorganic. If inorganic is used, it must be removed before the first mowing.
- Starter fertilizer shall be applied at the normal rate at the time of seeding. Fertilizer application will not be allowed in sensitive areas and adjacent to drainage ways as determined by the Engineer.
- Watering is to be done by the Contractor to maintain proper growth. Contractor shall supply the water and all apparatus necessary to apply the water (i.e. hoses, sprinklers, etc.).
- Staking of all topsoiled areas to control foot traffic will be required. Acceptable staking materials will be grade stakes and twine or string with flagging attached for visibility. Contractor is responsible to maintain stakes throughout the warranty period.
- A guarantee through the first growing season is required with any sparse or bare areas larger than 1 sq. ft. to be redone.
- The Contractor shall test topsoil to determine proper application rate of lime and fertilizer. Submit tests to Engineer for approval.
- Seeding is permitted from May 15 - June 15, and August 15 - September 15. Other seeding is possible at other times with prior approval from the Engineer.

CONSTRUCTION STAKEOUT NOTES

The Contractor shall be responsible for all construction stakeout for the project. The Engineer shall provide the Contractor an AutoCAD R2000 drawing of the site design. The drawing will include horizontal and vertical survey control. Additional survey control will be the responsibility of the Contractor.

- The Contractor shall be responsible for using proper survey equipment and having properly trained personnel to use this information. Any Contractor that does not have proper equipment or personnel shall subcontract the work to a competent consultant.
- The horizontal control datum may be based on a coordinate system that is unique for this project. Project north may not refer to astronomic or magnetic north.
- The Contractor shall check the integrity of survey control points by occupying a control point checking distance to back sight and checking distance and angle to another control point prior to any construction stakeout. The contractor shall not proceed with stakeout if either measured distances or angles do not match calculated values.
- Graphical images of infrastructure in the AutoCAD drawing may not be in an accurate representation of its size. It is the Contractor's responsibility to verify size and shape of all items to be staked out.
- After completion of radial stakeout with the survey transit, the Contractor shall check each stakeout point as necessary to verify the horizontal and vertical position of the point and that it is correct in relationship to the rest of the project.
- The Contractor shall complete all construction stakeout to an accuracy of 0.1 feet (excluding building stakeout).

North American Green S75BN

Material Content

Straw	100% (.50 lbs./sq.yd.) (.27 kg/m ²)
Netting	Leno woven, 100% biodegradable jute fiber
Weight	approximately 1.64 lbs./1000 s.f.
Thread	Biodegradable

Installed as per manufacturer's specifications.

Material Specifications

Erosion control blanket shall be a machine-produced mat of 100% agricultural straw.

The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with natural fiber netting having an approximate 1/2" X 1/2" mesh and be sewn together with biodegradable thread.

Straw erosion control blanket shall be S75BN as manufactured by North American Green, Inc. (812-867-6632) or equivalent. Erosion control blanket shall have the following properties:

Erosion Control Matting

Date revised	Description	Checked	Date
Design	WHN		
Drawn	SLM		
Checked			
Scale	As Noted		
Date	10/21/14		
Project	14201 North Ave. and Haswell Street		Burlington, Vermont
KREBS & LANSING Consulting Engineers, Inc.			
164 Main Street, Colchester, Vermont 05446			
PERMIT REVIEW ONLY			CD-4